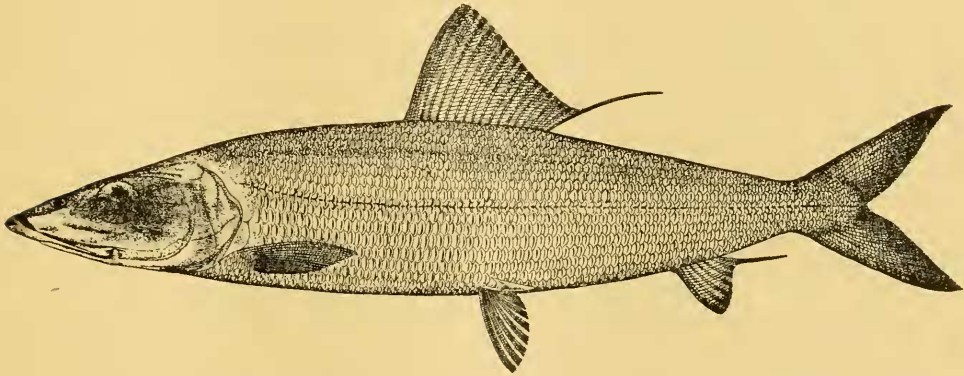


A NEW ALBULOID FISH FROM SANTO DOMINGO.

BY HENRY W. FOWLER.

DIXONINA gen. nov.Type *Dixonina nemoptera* sp. nov.

Body elongate, robust, fusiform. Head elongate, slender, compressed, attenuate. Snout conic, pyramidal, well protruded beyond mandible. Eye moderate. Adipose eyelid well developed. Mouth large, horizontal. Maxillary strong, large, nearly to middle in head length, slips below broad membranous preorbital. Premaxillaries moderate, non-protractile. Lateral edge of upper jaw formed by maxillary. Jaws, vomer and palatines with villiform teeth. Coarse



blunt paved teeth in broad areas on basibranchial, sphenoid and pterygoid bones. Tongue broad. Nostrils small, together. Interorbital and head above mostly depressed. Opercle moderate, firm. Preopercle with posterior membranous edge more produced behind below. Rakers short asperous tubercles, few in number. Pseudo-branchiæ present. Gill-membranes entirely separate, free from isthmus, fold across anteriorly with its hind edge plicate. No gular plate. Body covered with rather small brilliantly silvered scales, head naked, and fins minutely scaled. Belly convex, covered with usual squamation. Lateral line complete. Dorsal moderate, inserted well before ventral. Anal well behind dorsal, small. Pectoral small, also ventral. Coloration uniform.

This interesting genus is the second known among the living representatives of the family *Albulidae*. From *Albula*, with its single alleged exotic species ranging through all tropical seas, it differs at once in the last rays of both the dorsal and anal being produced in long filaments, and its more slender head with a longer maxillary.

Named for Samuel G. Dixon, M.D., LL.D., President of the Academy of Natural Sciences of Philadelphia, in slight recognition of his appreciation and encouragement of ichthyology.

***Dixonina nemoptera* sp. nov.**

Head $3\frac{1}{2}$; depth $4\frac{3}{5}$; D. v, 16, 1; A. III, 6, 1; P. I, 16; V. I, 8; 76 scales in l. l. to caudal base (squamation injured); 9 scales obliquely back from dorsal origin to l. l.; 7 scales obliquely forward from anal origin to l. l.; 30 predorsal scales; head width $2\frac{2}{3}$ in head length; head depth at occiput $1\frac{9}{10}$; snout $2\frac{3}{5}$; eye $5\frac{2}{3}$; snout tip to maxillary end $2\frac{1}{12}$; mandible $2\frac{3}{5}$; interorbital $4\frac{4}{7}$; first branched dorsal ray $1\frac{7}{8}$; last dorsal ray $1\frac{9}{10}$; first branched anal ray $3\frac{3}{4}$; last anal ray $3\frac{1}{4}$; least depth of caudal peduncle $4\frac{1}{2}$; pectoral 2; ventral $2\frac{7}{8}$.

Body fusiform, rather robust or thick, sides flattened, upper profile apparently more convex than lower, deepest at dorsal origin, edges all rounded. Caudal peduncle compressed, least depth about $1\frac{4}{5}$ its length.

Head moderately compressed, robust, surfaces above and below rather depressed and but slightly convex, sides rather flattened and not approximated below or above, profiles inclined similarly to form attenuated contour. Snout long, ending in rather obtuse conic tip, width basally about $1\frac{1}{2}$ its length, depressed above posteriorly, sides rather flattened and approximating slightly above. Eye moderate, round, close to upper profile, slightly before center in head length. Adipose eyelid thick, well expanded over entire orbital region, aperture narrow, slit of which lower anterior edge forms flap over lower posterior edge, which extends well forward. Mouth large, well inferior, long snout protruding well forward beyond mandible tip, and gape not quite opposite eye front. Lips thick, fleshy, firm. Maxillary nearly back till opposite eye center, greater part concealed below broad preorbital, and distal expansion about $\frac{2}{3}$ of eye. Supplemental maxillary well expanded, its distal expansion little more than distal maxillary width. Narrow bands of firm conic teeth in each jaw, in upper only extending back along each premaxillary about half its length, along mandibular edge extending much further back. Vomer with crescentic patch of teeth similar and parallel to those in upper jaw. Pterygoids, sphenoid and basibranchials with broad

bands of obtuse molar-like teeth. Tongue thick, broadly triangular, edges narrowly free. Mandible depressed, rami not elevated inside mouth. Nostrils together, nearer eye than snout tip, anterior small pore with fleshy rim exposing posterior in narrow crescent. Inter-orbital space slightly concave. Supraorbital ridge rather prominent, especially anteriorly. Hind edge of preopercle inclined posteriorly, and obsolete ridge inclined anteriorly. Opercle rather small.

Gill-opening forward about opposite eye center. Rakers 4 + 9 short depressed finely asperous tubercles. Filaments about $\frac{1}{2}$ of eye. Pseudobranchiæ about $\frac{2}{3}$ of eye. Isthmus rather broad, thick, lower surface level. Branchiostegals about 14, each indicated on branchiostegal membrane by slight incision on its lower surface.

Scales cycloid, inner edges mostly crimped, outer or exposed edges thin or membranous and ragged, marked submarginally with a concurrent vertical ridge or striation, the true edge of the scale. Scales disposed in even horizontal series, and all over trunk of about uniform size. All fins densely covered with minute scales. Pectoral depressible below a horizontal scaly ridge, and basally covered with moderate-sized scales. Ventral with free pointed axillary scaly flap, length about $\frac{2}{3}$ fin, and moderately small scales on its base. Lateral line complete, nearly midway along side of body and straight. Tubes simple, horizontal, only pore at hind end exposed, opposite middle of emargination of hind or vertical striation on scale.

Dorsal origin about midway between snout tip and caudal base, first branched ray highest, though but trifle longer than last which is filamentous, otherwise branched rays graduated down to penultimate which is shortest. Anal small inserted behind depressed dorsal, or nearly at last $\frac{2}{3}$ in space between ventral origin and caudal base. Pectoral small, pointed, not quite half way to ventral. Ventral inserted nearly opposite seventh dorsal ray base or about midway between pectoral origin and last anal ray base. Caudal forked, small, lobes similar (ends damaged), apparently about equally pointed and also sharp. Vent about opposite depressed ventral tip.

Color in alcohol faded brilliant silvery-brassy or brownish, scales all quite bright. Fins and head also all same shade, and all more or less uniform, dorsal and caudal scarcely darker. Dull dusky streak over snout just behind its tip to beginning of preorbital groove. Head paler below than above. Iris dull brownish.

Length 15 inches (caudal damaged).

Type, No. 1597, A. N. S. P. Santo Domingo, West Indies. Prof. W. M. Gabb.

Only known from the above-described example taken many years ago in Santo Domingo with specimens of *Albula vulpes* (Linnæus), of the same size and sex, differing chiefly as pointed out above. *Albula vulpes* further differs in having the preopercular membrane extended back nearly to the gill-opening above, besides having the preopercle entirely inclined anteriorly along its hind edge and ridge. *Albula* also shows other minor differences, such as the aperture of the adipose eyelid, a simple opening and not folded over below, snout much shorter, and the eye more median in the head length. The accompanying figure is shown with the caudal fin restored, the tips of which are now damaged.

(*Nῆμα*, thread; *πτερόν*, fin; with reference to the last dorsal and anal rays.)